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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,374	02/05/2002	Sung-wei Sun	TSJ3053/EM	4544

23364 7590 09/24/2003

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EXAMINER

PHAM, LEDA T

ART UNIT PAPER NUMBER

2834

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/066,374

Applicant(s)

SUN ET AL.

Examiner

Leda T. Pham

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because in figure 7 – 8, the assigned number “C1” should be change to --C2--, and the assigned number “C2” should be change to --C1-- as recited in the specification paragraph 0044, page 12. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claims 3, 7, and 9 are objected to because of the following informalities: in claim 3 line 9, claim 7 line 3, and claim 7 line 4, “the lower end” is lacked of antecedent basis. Claim 9 line 2, “magnetic elements” is repeated. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1 – 2, 4, 6, 9, 11 – 12, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Jeong (U.S. Patent No. 6,420,810 B1).

Referring to claim 1, Jeong teaches a motor (figure 3) having a magnetic bearing comprising:

a base (21) provided with a bearing seat (20);

a stator (30) fixed onto the base;

a rotor (50) equipped with a rotation shaft (40) and rotating relatively to the stator by magnetic forces generated from excitation;

a bearing (bearing system 60 and 70) fastened to the bearing seat of the base for accommodating the rotation shaft of the rotor (60 fastened to 20);

and a magnetic unit composed of a first (90), a second (80) and a third (100) magnetic elements, wherein the second magnetic element is located below the first magnetic element; the third magnetic element is located below the second magnetic element; by employing the magnetic unit, the second magnetic element is restrained between the first and third magnetic elements, and therefore limiting a shift range of the rotation shaft (figure 3).

Referring to claim 2, Jeong teaches the motor having a magnetic bearing wherein the first magnetic element (90) is anchored to the bearing seat (20), the second magnetic element (80) is telescopically fitted to the outside of the rotation shaft (40) and the third magnetic (100) element is secured onto the base (21).

Referring to claim 4, Jeong teaches the motor having a magnetic bearing wherein the first and second magnetic elements are of the same pole and repulsive to each other (90, 80, figure 6), and the second and third magnetic elements are of the same pole and repulsive to each other (80, 100, figure 6).

Referring to claim 6, Jeong teaches the motor (figure 7) having a magnetic bearing comprising:

- a base (21) provided with a bearing seat (20);

- a stator (30) fixed onto the base,

- a rotor (50) equipped with a rotation shaft (40) and rotating relatively to the stator by magnetic forces generated from excitation;

- a bearing (bearing system 100, 110) fastened to the bearing seat (20) of the base (21) for accommodating the rotation shaft of the rotor;

- an upper magnetic unit composed of a first and second magnetic elements (70, 60), wherein the first magnetic element (70) is located above the second magnetic element (60) to generate a magnetic force therebetween to prevent the contact with each other;

- and a lower magnetic unit composed of a third and a fourth magnetic elements (90, 80), wherein the third magnetic element (90) is located above the fourth magnetic element (80) to generate a magnetic force therebetween to prevent the contact with each other.

Referring to claim 9, Jeong teaches the motor having a magnetic bearing wherein the first and second magnetic elements (70, 60) are of the same pole and repulsive to each other, and the third and fourth magnetic elements (90, 80) are also of the same pole and repulsive to each other (figure 7).

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Referring to claim 11, Jeong teaches a motor having a magnetic bearing (figure 7) comprising:

- a base (21) provided with a bearing seat (20);
- a stator (30) fixed onto the base,
- a rotor (50) equipped with a rotation shaft (40) and rotating relatively to the stator by magnetic forces generated from excitation;
- a bearing (bearing system 100, 110) fastened to the bearing seat (20) of the base (21) for accommodating the rotation shaft of the rotor;
- a magnetic unit (90, 80) composed of a first and a second magnetic elements, wherein the second magnetic element (80) is located below the first magnetic element (90) to provide an axial magnetic force and compensate the magnetic bias formed between the stator and the rotor, thus obtaining constant magnetic equilibrium.

Referring to claim 12, Jeong teaches the motor having a magnetic bearing wherein the first magnetic element (90) is fixed to the bearing seat (20) and the second magnetic element (80) is ring-shaped with its center hole telescopically fitted to the rotation shaft.

Referring to claim 14, Jeong teaches the motor having a magnetic bearing wherein the first and second magnetic elements (90, 80) are of the same pole and repulsive to each other (figure 7).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 5, 7 – 8, 10, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeong.

Referring to claim 3, 7 – 8, and 13, Jeong teaches the claimed invention except for the added limitation of the first magnetic element fitted to the rotation shaft, the second magnetic element anchored to the bearing seat, and the third magnetic element fitted to the rotation shaft. Jeong, however, teaches the first magnetic element (90) anchored to the bearing seat (20), the second magnetic element (80) fitted to the rotation shaft (40), and the third magnetic element (100) anchored to the bearing seat (20). Thus, it would be obvious to one of ordinary skill in the art at the time the invention was made to rearrange the magnetic elements for fitting to the rotation shaft or the bearing seat. Doing so would not change any function of the magnetic elements. Also, it has been held that rearranging parts of an invention involves only routine skill in the art, *In re Japikse*, 86 USPQ 70

Referring to claim 5, 10, and 15, Jeong teaches the claimed invention except for the added limitation of the magnetic elements opposite poles, and attractive towards each other. However, Jeong teaches in his invention that the magnetic elements are of the same poles, and repulsive to each other. Thus, it would be obvious to one of ordinary skill in the art at the time the invention was made to rearrange the magnetic elements to keep the shaft rotating and does not contact to the bearing seat (Jeong U.S. Patent No. 6,340,854 B1). Doing so would not change any function of the magnetic elements, and still keeping the rotation of the shaft without

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contacting to the bearing seat. Also, it has been held that rearranging parts of an invention involves only routine skill in the art, *In re Japikse*, 86 USPQ 70


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leda T. Pham whose telephone number is (703) 305-4864. The examiner can normally be reached on M-F (7:30-5:00) first Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

Leda T. Pham  
Examiner  
Art Unit 2834

  
PRIMARY EXAMINER  
KARL TAMAI

LTP  
September 12, 2003